

5. **Assertion (A):** A Bye exempts some teams from playing the first round. [1]
Reason (R): Sorting of the teams is made just like a staircase and there is no problem with an even or odd number of teams.
- a) Both A and R are true and R is the correct explanation of A. b) Both A and R are true but R is not the correct explanation of A.
c) A is true but R is false. d) A is false but R is true.
6. _____ is a postural deformity in which both the knees touch or overlap each other in a normal standing position. [1]
- a) Shock Knee b) Lock Knee
c) Weak Knee d) Knock Knee
7. **Assertion (A):** Aggression depends on the nature of sports or activity. [1]
Reason (R): Optimum level of aggression is a must to perform in the field of sports.
- a) Both A and R are true and R is the correct explanation of A. b) Both A and R are true but R is not the correct explanation of A.
c) A is true but R is false. d) A is false but R is true.
8. What is the key Objectives of Khelo India Fitness Assessment Programme? [1]
- a) Khelo India Sports School Admission b) AIM for Sporting Excellence
c) AIM for Khelo India Medal d) Fitness for All Students
9. Endurance is determined by which physiological factor? [1]
- a) Aerobic capacity b) Flexibility
c) Age, gender d) Injuries
10. **Assertion (A):** Correct body posture is the position of body hold without any sense of effort. [1]
B. Reason (R): The body weight should be equally distributed over both legs.
- a) Both A and R are true and R is the correct explanation of A. b) Both A and R are true but R is not the correct explanation of A.
c) A is true but R is false. d) A is false but R is true.
11. In the long jump take-off which law works: [1]
- a) Law of conservation of mass b) 2nd law of newton
c) 3rd law of newton d) 1st law of newton
12. Which of the following is not an example of isometric exercise? [1]

an individual. It contains various types of nutrients in it.



- (i) The bottom-most part of the food pyramid is occupied by _____, indicating large quantities of intake.
- (ii) Major portion of individuals diet constitute _____ nutrients
- (iii) What are fat-soluble vitamins?
- (iv) What is known as the body-building nutrient?

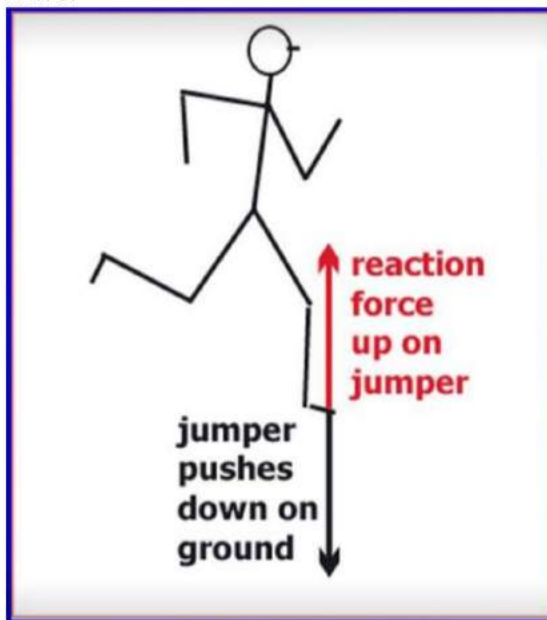
OR

Nutrients are _____ substances present in food.

32. Read the text carefully and answer the questions:

[4]

During the physical education class Newton's Laws of motion were discussed and their practical application in sports events was explained to students. These laws are most relevant in sports as most of the actions in sports are related to these laws.



- (i) Newton's First law of motion is also known as?
- (ii) What is the relationship between Mass and force?
- (iii) Newton's second law is also known as _____.
- (iv) The study of the human body and various forces acting on it is called _____.

OR

Flexion and extension comes under _____ movement.

33. **Read the text carefully and answer the questions:**

[4]

Posture plays a very significant role in our daily activities. Correct posture means the balancing of body in accurate and proper manner. Various types of postural deformities can be identified in individuals.



- (i) From the above-given picture, the deformities seen on the left most is caused due to deficiency of which nutrients?
- (ii) Walking on the inner edge of the feet can be a remedy for _____.
- (iii) The person in the middle is suffering from _____.
- (iv) Horse-riding is the best exercise for clearing which deformity?

Section E

Attempt any 3 questions

34. Ardhamatsyendrasana and Vajrasana help to reduce obesity. Discuss in detail. [5]
35. Explain in detail fartlek training method. [5]
36. What do Push Ups measure? How is it performed? [5]
37. Write the meaning and concept of aggression. Describe the types of aggression in sports. [5]



SOLUTION

Section A

1. **(b)** carbohydrate
Explanation: carbohydrate
2. **(b)** Pavanmuktasana
Explanation: Pavanmuktasana
3. **(b)** Creating special classrooms
Explanation: CWSN should be treated equally so that they don't feel low esteem before others. Hence, they require inclusive classrooms not separate.
4. **(c)** Bye
Explanation: Bye is a privilege that allows a team to get an entry in 2nd round without playing in 1st round.
5. **(b)** Both A and R are true but R is not the correct explanation of A.
Explanation: Both A and R are true but R is not the correct explanation of A.
6. **(d)** Knock Knee
Explanation: Knock Knee is a deformity in which both knees knock each other.
7. **(b)** Both A and R are true but R is not the correct explanation of A.
Explanation: Like Boxing we need to be more aggressive and in cricket we were using verbal aggression like sledging.
8. **(b)** AIM for Sporting Excellence
Explanation: AIM for Sporting Excellence
9. **(a)** Aerobic capacity
Explanation: Aerobic capacity is a major factor in determining endurance.
10. **(b)** Both A and R are true but R is not the correct explanation of A.
Explanation: Both A and R are true but R is not the correct explanation of A.
11. **(b)** 2nd law of newton
Explanation: 2nd law of newton works in case of the long jump.
12. **(a)** Running fast
Explanation: Running fast is an example of Isotonic exercise.
13. **(b)** Helpfulness
Explanation: Helpfulness is not a part of the big five personality traits.
14. **(d)** Ladder method
Explanation: The ladder method is not used in a league fixture. Stair, cyclic and tabular methods are different methods for deciding the procedure of league fixture. In a stair, the fixture is made like a ladder. In the cyclic method, teams are arranged in a way and they move in a clockwise direction. In the tabular method, teams are arranged in a table.
15. **(c)** Knee problems
Explanation: If someone is having knee injury they should avoid Sukhasana because it lays stress on knees.
16. **(b)** (i) - (d), (ii) - (a), (iii) - (b), (iv) - (c)
Explanation: (i) - (d), (ii) - (a), (iii) - (b), (iv) - (c)
17. **(b)** (a) - (iii), (b) - (i), (c) - (ii), (d) - (iv)
Explanation: (a) - (iii), (b) - (i), (c) - (ii), (d) - (iv)



18. (b) Whole grain food

Explanation: Whole grain food is a very rich source of carbohydrates.

Section B

19. It strengthens the heart. The heart is a muscle like other muscles, its performance improves when it's regularly challenged by exercise. The heart responds to exercise by becoming stronger and more efficient.

20. The test I would suggest grand mother for measuring upper body flexibility is Chair sit and reach test

21. Lordosis is a common defect in deformity & posture. Here lumber curve becomes more pronounced and front central position of pelvic region is tilted forward.

22. Importance of Fluid Intake:

- o To maintain water balance.
- o Help to transport nutrients throughout the body
- o Help to remove waste from the body.

23. **Physical activity** simply means movement of the body that uses energy. Walking, gardening, briskly pushing a baby stroller, climbing the stairs, playing soccer, or dancing the night away are all good examples of being active. For health benefits, physical activity should be moderate or vigorous intensity.

24. Asthma is a disease of lungs in which the airways become blocked or narrowed causing difficulty in breathing.

Section C

25. fixture for 5 teams :

No. of rounds = 5

No. of matches = $n(n-1)/2$

Round I	Round II	Round III	Round IV	Round V
Bye v/s 5	Bye v/s 4	Bye v/s 3	Bye v/s 2	Bye v/s 1
1 v/s 4	2 v/s 5	3 v/s 1	4 v/s 2	5 v/s 3
2 v/s 3	3 v/s 4	4 v/s 5	5 v/s 1	1 v/s 2

Here, keeping the Bye at fixed position the teams are rotated in clockwise direction.

26. The five effects of exercise on respiratory system are :

- Increase in Tidal air capacity: by doing regular exercise it has been noted that there is an increase in the amount of tidal air capacity of an individual.
- Decrease in rate of respiration: When a beginner starts exercising his rate of respiration increases. But when the same individual performs exercise daily, his rate of respiration decreases in comparison to the beginner at rest.
- Strong will power: regular exercise increases the will power of an individual. As pranayama, the specific exercise for lungs increases the will power of the doer.
- Unused alveolus becomes active: Regular exercise activates the unused alveolus because much amount of oxygen is required in vigorous activities of daily routine. The passive alveoli become active.

27. Improved reaction ability is a performance prerequisite to do motor actions under given conditions in minimum time. There are two methods for improving this. They are



1. Acceleration runs– It is the ability to increase speed from jogging to running and finally sprinting. It depends on explosive strength, the frequency of movement & to attain maximum speed from a stationary position this is practiced after learning proper technique.
 2. Pace run or races– A competitive pace race is a timed race in which the objective is not to finish in the least time, but to finish within the prescribed time and in the best physical condition. In some races, the prescribed time is very narrowly defined and the winner is the competitor who finishes closest to the prescribed time. Complete recovery is ensured between two repetitions. This means to run the whole distance of a race at a constant speed. In this, the athlete runs the race with the uniform.
28. The force acting along two surfaces in contact which oppose the motion of one body over the other is called the force of friction. It is very important in sports. That lagged the area of contact between the surfaces, the greater is the force of friction. When both the surfaces are smooth, the force of friction reduces to almost zero. Three types of friction are
- i. Static Friction The opposing force that comes into play when one body tends to move over the another surface but the actual motion has not yet red
 - ii. Limiting Friction Limiting friction is the maximum of thing force that comes into play when one body is just on the verge of moving over the surface of another body.
 - iii. Kinetic Friction Kinetic friction is the opposing force at comes into play when one body is actually moving over the surface of another body.
29. The following strategies should be taken into consideration to make physical activities accessible for the children with special needs:
- a. Medical check-up: if we want to make physical activities accessible for the children with special needs, we need to understand the type of disabilities of children and for this purpose complete medical check-up of the children is required. Because without complete medical check-up, the teachers of physical education cannot come to know about the type of disability child is facing.
 - b. Activities based on interests: Physical activities must be based on interest, aptitudes, abilities, previous experience and limitations of children with special needs. The teachers of physical education should have deep knowledge of limitations, interest and aptitudes of children.
 - c. Different instructional strategies: A variety of different instructional strategies such as verbal, visual and peer teaching should be used for performing various types of physical activities. By this children get opportunity to learn by their own and become independent.
30. i. Yes, protective gears are very important in sports as they serve an integral role in maintaining the safety of the players and in preventing injuries. In contact sports like football, handball and in sports where the prop is used like hockey sticks, players have a greater chance of injury. Therefore protective gears are important.
- ii. Injury at the superficial layer of the skin also called abrasion is a soft tissue injury. The RICER technique should be used as a first aid in soft tissue injuries.

Section D

31. Read the text carefully and answer the questions:



Food is the basic requirement of every individual to fulfill the energy needs and to meet the development of the body. The nutritious diet directly affects the health of an individual. It contains various types of nutrients in it.



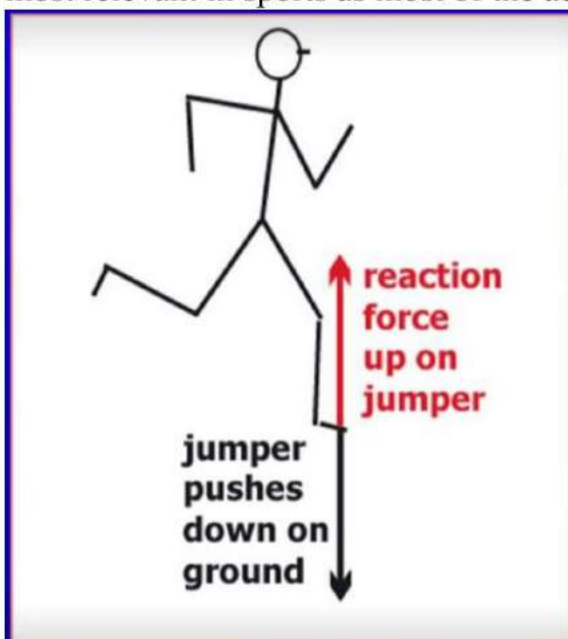
- (i) carbohydrates
The bottommost part of the food pyramid is occupied by carbohydrates. It is required in large amounts by the body as it is a body-building food. Major energy needs in the body is provided by carbohydrates.
- (ii) macro
Major portions of an individual's diet consist of macro nutrients, Carbohydrates, fats and proteins are called macronutrients. They give energy to the body and maintain the body's structure and systems.
- (iii) Vitamin A, D, E and K are called fat-soluble vitamins because they are absorbed in the intestine in the presence of fat. Rest of the vitamins are water-soluble vitamins.
- (iv) Proteins are body-building foods. They contain amino acid that helps in muscle growth. They are useful in maintaining all types of body tissues.

OR

Nutrients are the essential element of any food.

32. Read the text carefully and answer the questions:

During the physical education class Newton's Laws of motion were discussed and their practical application in sports events was explained to students. These laws are most relevant in sports as most of the actions in sports are related to these laws.



- (i) Newton's First Law of Motion of motion is also known as the law of inertia.

- (ii) The relationship between Mass and Force is directly proportional, i.e force is directly proportional to mass.
- (iii) Newton's Second Law is also known as the law of acceleration.
- (iv) biomechanics

OR

Flexion and extension comes under **angular** movement.

33. Read the text carefully and answer the questions:

Posture plays a very significant role in our daily activities. Correct posture means the balancing of body in accurate and proper manner. Various types of postural deformities can be identified in individuals.



- (i) The deformities seen on the left most is caused due to the deficiency of calcium and vitamin D. This deformity is known as bow-legged.
- (ii) Bow legs
Walking on the inner edge of the feet can be a remedy for bow legs.
- (iii) Knock knees
The person in middle is suffering from knock knees.
- (iv) Horse riding is the best exercise for treating knock knees deformity.

Section E

34. Diabetes:

Diabetes is commonly known as a metabolic disorder characterized by high blood sugar levels over a prolonged period. Diabetes is due to either the pancreas not producing enough insulin or the cell of the body not responding properly to the insulin produced. Due to diabetes, the individual has fatigue, frequent urination, increased thirst, and increased Hunger. It may cause blurred vision. Kidney failure, cardiovascular disease, loss of weight, etc.

The main reason for diabetes is a sedentary lifestyle. By doing bhujangasan, paschimottanasana, pavanmuktasana and ardh matsyandrasana, one can get rid of this disease.

Symptoms of Diabetes:

- i. Fatigue
- ii. Increased Thirst
- iii. Increased Hunger
- iv. Blurred Vision
- v. Kidney Failure
- vi. Cardiovascular Disease
- vii. Loss of Weight
- viii. Frequent Urination

Causes of Diabetes:

- i. Sedentary lifestyle
- ii. Disease



iii. Overweight

iv. Obesity

v. Stress & Tension

Diabetes is a metabolic disorder in which the level of sugar in the blood rises from its normal reference value.

Types of Diabetes:

- i. **Type I Diabetes:** In that type of diabetes blood sugar level rises very high due to the non-secretion of insulin hormone by the pancreas. In that of diabetes affected person has to take artificial insulin through injection.
 - ii. **Type II Diabetes:** In that type of diabetes blood sugar level rises but not as high as type I diabetes. In that type of diabetes, our pancreas secreting the insulin hormone but it may be insufficient to control the blood sugar level normal or body cell is not able to respond to insulin properly.
35. **FARTLEK** :- It is a Swedish term that means "speed play," is a form of interval or speed training that can be effective in improving your speed and endurance. Fartlek running involves varying your pace throughout your run, alternating between fast segments and slow jogs. Unlike traditional interval training that involves specific timed or measured segments, fartleks are more unstructured. Work-rest intervals can be based on how the body feels. With fartlek training, you can experiment with pace and endurance, and to experience changes of pace. This method was developed in Scandinavia. It is used to describe cross country runs where the steady speed of ordinary cross country running is changed into a mixture of faster and slower phases, each covering a different distance over natural terrain according to the individual approach of the sports person. The change of intensity is done depending upon the surface of running, surrounding condition of the sports person, climate and the like. This method is effective for development of both aerobic and anaerobic capacities of sports persons.
36. Push Ups measures upper body strength endurance and trunk stability.

How to Perform:

A standard push up begins with the hands and toes touching the floor, the body and legs in a straight line, feet slightly apart, the arms at shoulder width apart, extended and at a right angles to the body.

Keeping the back and knees straight, the subject lowers the body to a predetermined point, to touch some other object, or until there is a 90-degree angle at the elbows, then returns back to the starting position with the arms extended.

This action is repeated, and test continues until exhaustion, or until they can do no more in rhythm or have reached the target number of push-ups.

For Girls: push-up technique is with the knees resting on the ground.

37. **Meaning:-** Any physical or verbal behaviour that is intended to harm another either physically or psychologically intentionally or unemotionally.

Concept:- Different psychologists have given different meanings to the term aggression. As per instinct theory, aggression is an inbuilt emotion in human beings, as per social learning theory, it is acquired. Frustration theory points out that frustration is the cause of aggression.

There are three types of Aggression in sports:



- i. **Hostile Aggression:** Any physical behaviour which is aimed to physically injured a living being intentionally is known as Hostile Aggression.
- ii. **Instrumental Aggression:** Any physical behaviour which is aimed to achieve high performance but unintentionally physically harms the living being is known as instrumental Aggression.
- iii. **Assertive Aggression:** Any verbal behaviour under the Rules & Regulation of the sport which is used to harm psychological to a living being. In this only legitimate forces are used.

